

CLAIM AMENDMENTS

1. (currently amended) ~~A system Apparatus~~ for integrating a seller's Web site with a public key infrastructure, ~~the Web site comprising a Web server and a Web application, wherein:~~ the public key infrastructure ~~comprising~~ comprises a buyer computer ~~comprising~~ having a Web browser adapted to invoke a signing interface to digitally sign electronic messages, ~~the public key infrastructure further comprising~~ and a seller's bank computer system adapted to receive service requests from the seller and to respond to those requests with ~~digitally signed service responses~~ and:
the system comprising seller's Web site comprises:
a filter adapted to redirect HTTP requests received from the Web browser, coupled to the filter, an Internet server application adapted to receive a redirected HTTP request from the filter and to process the redirected HTTP request; and
coupled to the Internet server application, a filter engine adapted to receive the processed HTTP request and to identify an HTTP request that contains data requiring a digital signature by the buyer computer.
2. (currently amended) The system apparatus of claim 1, wherein:
the filter engine is further adapted to identify an HTTP request that requires accessing a service offered by the seller's bank and to formulate a request for the service; and wherein
the system seller's Web site further comprises: , coupled to the filter engine, a bank interface adapted to receive the request from the filter engine, reformat the request, and transmit the request to the seller's bank.
3. (currently amended) The system apparatus of claim 2, wherein the bank interface is further adapted to receive a service response to the request from the seller's bank, and forward the response to the filter engine.

4. (currently amended) The system apparatus of claim 2, wherein the service is certificate validation.

5. (currently amended) The system apparatus of claim 1, wherein the seller's Web site further comprising comprises, coupled to the filter, a second Web server adapted to parse requests redirected by the filter.

6. (currently amended) The system apparatus of claim 1, wherein services provided by the seller's bank are provided within the context of a four-corner model.

7. (currently amended) The system apparatus of claim 6, wherein the four-corner model comprises the buyer, the seller, the seller's bank, and a buyer's bank.

8. (currently amended) The system apparatus of claim 1, wherein the filter is implemented using ISAPI.

9. (currently amended) The system apparatus of claim 1, wherein the Internet service server application is adapted to generate HTTP responses based on data received from the filter engine.

10. (currently amended) The system apparatus of claim 1, wherein the Internet server application is adapted to pass a hash table to the filter engine.

11. (currently amended) The system apparatus of claim 10, wherein the hash table comprises the headers from the redirected HTTP request.

12. (currently amended) The system apparatus of claim 10, wherein the hash table comprises the indicates a method of the redirected HTTP request.

13. (currently amended) The system apparatus of claim 10, wherein the hash table comprises the content-type of the redirected HTTP request.

14. (currently amended) The system apparatus of claim 10, wherein the hash table comprises the buyer computer's IP address.

15. (currently amended) The system apparatus of claim 10, wherein the hash table comprises the actual data in the redirected HTTP request.

16. ((currently amended) The system apparatus of claim 10, wherein the hash table comprises a unique session ID.

17. (currently amended) The system of claim 1 A system for integrating a seller's Web site with a public key infrastructure, the Web site comprising a Web server and a Web application, the public key infrastructure comprising a buyer computer comprising a Web browser adapted to invoke a signing interface to digitally sign electronic messages, the public key infrastructure further comprising a seller's bank computer system adapted to receive service requests from the seller and respond to those requests with digitally signed service responses; the system comprising:

a filter adapted to redirect HTTP requests received from the Web browser;
an Internet server application adapted to receive a redirected HTTP request from the filter and process the redirected HTTP request; and

a filter engine adapted to receive the processed HTTP request and identify an HTTP request that contains data requiring signature by the buyer; wherein;

the Internet service server application is a servlet.

18. (currently amended) The system of claim 20 17, wherein the servlet is constructed as a public class object that extends javax.servlet.http.HttpServlet.

19. (currently amended) The system of claim 24 18, wherein the public class object comprises at least one of a callFilterEngine method, a doGet method, a doPost method, a getRequestHeaders method, a handle Request method, and an init method, a print ErrorResponse

method, a printPluginPage method, a readMessage method, a read requestData method, and a setServletHeaders method.

20. (previously presented) The system of claim 17, wherein the filter engine is adapted to return an object to the servlet.

21. (currently amended) The system apparatus of claim 20, wherein the object comprises an integer value indicating one of the following four conditions:

that a signature is required on data in the HTTP request, that ;
a response has been received from the seller's bank concerning a service request, that ;
the HTTP request has been passed through to ~~the~~ a Web application, or that ;
an error occurred.

22. (currently amended) The system apparatus of claim 4 21, wherein if when the integer value indicates that a signature is required on data in the HTTP request ~~then~~, the Internet server application stores a state of the filter engine in a cookie and causes a Web page containing the cookie and an instruction to sign the data to be transmitted to the Web browser.

23. (currently amended) The system apparatus of claim 1, wherein the filter engine determines whether an HTTP request contains data requiring signature by applying filtering rules.

24. (currently amended) The system apparatus of claim 1, wherein the filter engine is programmed to recognize each HTTP request that includes data requiring a digital signature by the buyer's computer.

25. (currently amended) The system apparatus of claim 1, wherein the filter engine is programmed to recognize HTTP requests transmitted by the Web browser that have been modified to include a special tag that indicates whether the request includes data that requires a digital signature by the buyer's computer.

26. (currently amended) The system of claim 1 A system for integrating a seller's Web site with a public key infrastructure, the Web site comprising a Web server and a Web application, the public key infrastructure comprising a buyer computer comprising a Web browser adapted to invoke a signing interface to digitally sign electronic messages, the public key infrastructure further comprising a seller's bank computer system adapted to receive service requests from the seller and respond to those requests with digitally signed service responses; the system comprising:

a filter adapted to redirect HTTP requests received from the Web browser;
an Internet server application adapted to receive a redirected HTTP request from the filter and process the redirected HTTP request; and
a filter engine adapted to receive the processed HTTP request and identify an HTTP request that contains data requiring signature by the buyer; wherein;
the filter engine is implemented as a public class object that extends java.lang.object.

27. (currently amended) The system of claim 26, wherein the public class object comprises at least one of the following methods: a callWebApp method, a getSessionID method, a newRequestHandler method, an oldRequestHandler method, a service method, and a signedRequestHandler method.

28. (currently amended) The system apparatus of claim 1, wherein the filter engine provides an abstracted front end interface via an object oriented computer programming language remote method invocation.

29. (currently amended) The system apparatus of claim 1, wherein the filter engine employs a rules class.

30. (currently amended) The system of claim 1 A system for integrating a seller's Web site with a public key infrastructure, the Web site comprising a Web server and a Web application, the public key infrastructure comprising a buyer computer comprising a Web

browser adapted to invoke a signing interface to digitally sign electronic messages, the public key infrastructure further comprising a seller's bank computer system adapted to receive service requests from the seller and respond to those requests with digitally signed service responses; the system comprising:

a filter adapted to redirect HTTP requests received from the Web browser;

an Internet server application adapted to receive a redirected HTTP request from the filter and process the redirected HTTP request;

a filter engine adapted to receive the processed HTTP request and identify an HTTP request that contains data requiring signature by the buyer, further comprising; and

a rules class, wherein the rules class comprises the following methods: a getMode method, a getService method, a readRules method, a rulesMatch method, and a validateRules method.

31. (currently amended) The system apparatus of claim 1, wherein the seller's Web site further comprising comprises, coupled to the filter engine, a bank interface, wherein the bank interface is designed with a plug-in based architecture.

32. (currently amended) The system apparatus of claim 1, wherein the seller's Web site further comprising comprises, coupled to the filter engine, a bank interface, wherein the bank interface supports supporting an abstract front-end interface to allow communication via a plurality of middleware technologies.

33. (currently amended) The system apparatus of claim 1, wherein the seller's Web site further comprising comprises, coupled to the filter engine, a bank interface, wherein the bank interface is adapted to create and transmit OCSP requests.

34. (currently amended) The system apparatus of claim 1, wherein the seller's Web site further comprising comprises, coupled to the filter engine, a bank interface, wherein the bank interface comprises comprising a certificate status check module.

35. (currently amended) The system of claim 1 A system for integrating a seller's Web site with a public key infrastructure, the Web site comprising a Web server and a Web application, the public key infrastructure comprising a buyer computer comprising a Web browser adapted to invoke a signing interface to digitally sign electronic messages, the public key infrastructure further comprising a seller's bank computer system adapted to receive service requests from the seller and respond to those requests with digitally signed service responses; the system comprising:

a filter adapted to redirect HTTP requests received from the Web browser;

an Internet server application adapted to receive a redirected HTTP request from the filter and process the redirected HTTP request;

a filter engine adapted to receive the processed HTTP request and identify an HTTP request that contains data requiring signature by the buyer, further comprising: and

a bank interface, wherein the bank interface comprises a public class object that extends java.lang.object.

36. (currently amended) The system of claim 1 A system for integrating a seller's Web site with a public key infrastructure, the Web site comprising a Web server and a Web application, the public key infrastructure comprising a buyer computer comprising a Web browser adapted to invoke a signing interface to digitally sign electronic messages, the public key infrastructure further comprising a seller's bank computer system adapted to receive service requests from the seller and respond to those requests with digitally signed service responses; the system comprising:

a filter adapted to redirect HTTP requests received from the Web browser;

an Internet server application adapted to receive a redirected HTTP request from the filter and process the redirected HTTP request;

a filter engine adapted to receive the processed HTTP request and identify an HTTP request that contains data requiring signature by the buyer, further comprising: and

a public class, wherein the public class object comprises a createOCSPRequest method, a getCertificateID method, a getCertStatus method, a getCertVerifyMessage method, a getURL method, an isResponseSuccessful method, a logAndBuildReturnObject method, a processOCSP method, a sendAndReceiveMessage method, a serviceRequest method, and a verifyResponseSignature method.

37. (currently amended) A system Apparatus for integrating a seller's Web site with a public key infrastructure, said apparatus comprising:

a Web server located at the seller's Web site;

a Web application connected coupled to the Web server and also located at the seller's Web site, the Web application adapted to:

identify those HTTP requests from a buyer that include data requiring a digital signature of the buyer and to:

create a Web page for transmission to a browser controlled by the buyer that will cause the browser to invoke a signing interface to digitally sign the data; and

~~the Web application further adapted to identify those HTTP requests that require a service provided by an entity other than the seller; and~~

coupled to the Web application and also located at the seller's Web site, a bank an interface module adapted to receive a request for service from the Web application, format and transmit the request, receive a response to the request, and forward the response to the Web application.